

IN THE CLAIMS:

The claims are amended as follows:

1. (Once Amended) An injection molding method comprising:
injecting a molten resin material into a cavity defined by a fixed die and a movable die
via a runner provided in the fixed die and a gate provided in the fixed die,
wherein when the molten resin material is being charged into the cavity through the resin
reservoir from the gate, a cut punch, which is provided in the side of the movable die that
confronts the gate through a resin reservoir formed by recessing the fixed die toward the gate and
which is movably provided so that the cut punch is inserted into the resin reservoir so as to be in
slidable contact with the resin reservoir, has a distal end thereof extending in a moving direction
thereof that is toward the resin reservoir of the cut punch, and the distal end is located between
the resin reservoir and the cavity at such a position as to open a communicating portion that
allows the resin reservoir and the cavity to communicate with each other so that the molten resin
material is introduced into the cavity via the resin reservoir; and
wherein when an inner portion of the resin material that is present in the resin reservoir is
still molten and a portion of the resin material thereof that is in direct contact with the cooled
dies is gradually solidified after the molten resin material has been charged into the cavity and
the resin reservoir, the cut punch moves toward the gate so that the cut punch is inserted into the
resin reservoir, whereby the cut punch not only closes the communicating portion while forcibly
pushing the still molten resin material present in the resin reservoir back into the gate, but also
cuts the resin material at the communicating portion so that a resin molded product formed in the
cavity is separated from a resin solidified portion formed in the resin reservoir.

4. (Once Amended) An injection molding method according to claim 3, wherein the hot runner has a valve gate structure, in which a valve gate is closed to close the gate after the cut punch has moved.

5. (Once Amended) An injection molding method according to claim 1, wherein a resin molded product having an opening is molded by a resin reservoir and the cut punch inserted into the resin reservoir, the resin reservoir being provided so as to correspond to a shape of the opening of the resin molded product.

6. (Once Amended) An injection mold comprising:
a fixed die and a movable die which form a cavity into which a molten resin material is injected via both a runner and a gate provided in the fixed die, the gate being connected to the cavity through a resin reservoir formed by recessing the fixed die toward the gate; and

a cut punch provided on the side of the movable die that confronts the gate through the resin reservoir, the cut punch being movable so that the cut punch can be inserted into the resin reservoir so as to be in slidable contact with the resin reservoir,

wherein when the molten resin material is being charged into the cavity, a distal end of the cut punch which extends in a moving direction of the cut punch that is toward the resin reservoir is located between the resin reservoir and the cavity at such a position as to open a communicating portion that allows the resin reservoir and the cavity to communicate with each other so that the molten resin material is introduced into the cavity via the resin reservoir;

wherein when an inner portion of the resin material that is present in the resin reservoir is still molten and a portion of the resin material thereof that is in direct contact with the cooled dies is gradually solidified after the molten resin material has been charged into the cavity and

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the resin reservoir, the cut punch moves toward the gate so that the cut punch is inserted into the resin reservoir, whereby the cut punch not only closes the communicating portion while forcibly pushing the still molten resin material present in the resin reservoir back into the gate, but also cuts the resin material at the communicating portion so that a resin molded product formed in the cavity is separated from a resin solidified portion formed in the resin reservoir, and

wherein the runner contacts the resin reservoir, and the gate is disposed at the point where the runner contacts the resin reservoir, such that the gate does not protrude into the resin reservoir.

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10. (Once Amended) An injection mold according to claim 6, wherein the injection mold is used to mold a resin molded product having an opening and has a resin reservoir and a cut punch inserted into the resin reservoir, the resin reservoir and the cut punch being provided so as to correspond to the opening of the resin molded product.

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11. (Once Amended) An injection mold according to claim 6 wherein a depth as viewed in a moving direction of the cut punch in the resin reservoir is 1.5 to 10 times an opening distance of the communicating portion.

12. (Once Amended) An injection mold according to claim 6, comprising an undercut portion on the distal end of the cut punch, the undercut portion serving to hold the resin solidified portion formed in the resin reservoir at the time of mold opening.

Please add the following new claims.

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13. (New) An injection molding method comprising:

injecting molten resin material via a runner to flow from an injection nozzle located in a fixed die, through a gate and into a resin reservoir, and to further flow into a cavity via a communication portion, the communication portion being located between the resin reservoir and the cavity; and

forming a resin molded product in the cavity by closing the communication portion so that the resin molded product formed in the cavity is separated from a resin solidified portion formed in the resin reservoir,

wherein, the communication portion is closed by advancing a cut punch from a movable die portion through the resin reservoir towards the gate portion, the cut punch provided in the side of the movable die that confronts the gate and being in slidable contact with the resin reservoir, and

wherein, the closing is performed when an inner portion of the resin material present in the resin reservoir is still molten and a portion of the resin material in both the resin reservoir and the cavity, which are in contact with the fixed and movable die, is partially solidified, the cut punch pushing the molten inner portion still present in the resin reservoir back into the gate.

14.(New) The injection molding method according to claim 13, further comprising removing the resin solidified portion attached to the cut punch using a pushing device, the pushing device being slidably mounted inside the cut punch, so as to be independent of the cut punch, wherein

the resin solidified portion is formed from the resin remaining in the resin reservoir after the communication portion has been closed.

15. (New) An injection mold comprising:

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a fixed die and a movable die which form a cavity into which a molten resin material is injected via both a runner and a gate provided in the fixed die, the gate being connected to the cavity through a resin reservoir formed by recessing the fixed die toward the gate;

a cut punch provided on the side of the movable die that confronts the gate through the resin reservoir, the cut punch being movable so that the cut punch is operative to be inserted into the resin reservoir so as to be in slidable contact with the resin reservoir; and

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a communicating portion, formed between the resin reservoir and the cavity when the cut punch is not in slidable contact with the resin reservoir, the communication portion allowing the resin reservoir and the cavity to communicate with each other so that the molten resin material is introduced into the cavity via the resin reservoir,

wherein a molded resin product is formed when the cut punch device moves through the resin reservoir towards the gate to close the communication portion, which cuts the resin material at the communication portion so that the resin molded product formed in the cavity is separated from a resin solidified portion formed in the resin reservoir, and

wherein the cut punch moves at a time when an inner portion of the resin material that is present in the resin reservoir is still molten and a portion of the resin material thereof that is in direct contact with cooled dies is gradually solidified after the molten resin material has been charged into the cavity and resin reservoir.

16. (New) The injection mold of claim 15, wherein the end of the cut punch which extends in a moving direction towards the resin reservoir is considered a distal end, the distal end containing an undercut portion which holds the resin solidified portion to the cut punch when the mold is opened.

17. (New) The injection mold of claim 16, further comprising a pushing device for removing the resin solidified portion which is attached to the distal ends of the cut punch, the pushing device being slidably mounted inside the cut punch, so as to be independent of the cut punch.

18. (New) An injection mold comprising:

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a fixed die and a movable die which form a cavity into which a molten resin material is injected via both a runner and a gate provided in the fixed die, the gate being connected to the cavity through a resin reservoir formed by recessing the fixed die toward the gate; and

a cut punch provided on the side of the movable die that confronts the gate through the resin reservoir, the cut punch being movable so that the cut punch can be inserted into the resin reservoir so as to be in slidable contact with the resin reservoir and having a distal end which extends in a moving direction of the cut punch that is toward the resin reservoir, the distal end located between the resin reservoir and the cavity at such a position as to open a communicating portion that allows the resin reservoir and the cavity to communicate with each other so that the molten resin material is introduced into the cavity via the resin reservoir; and

means for driving the cut punch when an inner portion of the resin material that is present in the resin reservoir is still molten and a portion of the resin material thereof that is in direct

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contact with the cooled dies is gradually solidified after the molten resin material has been charged into the cavity and the resin reservoir,

wherein the cut punch is driven toward the gate so that the cut punch is inserted into the resin reservoir, whereby the cut punch not only closes the communicating portion while forcibly pushing the still molten resin material present in the resin reservoir back into the gate, but also cuts the resin material at the communicating portion so that a resin molded product formed in the cavity is separated from a resin solidified portion formed in the resin reservoir.